

SANITARY COUPLING FOR NEEDLE AND MECHANIZED PUNCH FOR
MICROPIGMENTATION AND TATTOOING

OBJECT OF THE INVENTION

5 The present invention relates to a sanitary coupling for needle and mechanized punch for micropigmentation and tattooing.

BACKGROUND OF THE INVENTION

10 At present, for application of micropigmentation and tattoo treatments, needles with one or several tips are used coupled interchangeably to a mechanized punch that comprises a pencil shaped casing for a better grip, with an internal motor and a transmission accessible from outside, to which the needle itself is coupled, and which imparts micromovement of the sheaf in the axial direction, which effects the introduction of the pigment under the skin, puncturing the skin.

15 The transmission where the needle is coupled consists of a bolt that passes through the casing through an orifice for that purpose, and in which the needle is housed or screwed by means of its own hollow end.

20 These configurations have two main drawbacks as, on the one hand, simple coupling by housing –the most widely used- often causes unwanted uncoupling of the needle, and on the other hand both the configurations by insertion and those with a screw fit can readily cause backflow of the pigment and other fluids, sometimes body fluids, because of the punctures made by the needle, towards the interior of the casing of the punch through the orifice through which transmission passes, which is a health problem and can even cause faults.

25 This is a great disadvantage of the current couplings as, although at present throwaway needles can be purchased, this does not prevent contamination of the interior of the casing by the passage of fluids, and even less so in the case of reusable needles, which need to be sterilized in an autoclave the use of which may be doubted by the patients.

30 DESCRIPTION OF THE INVENTION

 The coupling of the invention serves for attaching a micropigmentation and/or tattooing needle to the mechanized punch responsible for the movement of the sheaf, in optimal sanitary conditions, as it prevents pigmentation or human fluids that are



produced during application of the pigments from penetrating the interior of the casing of the punch and contaminating its interior or damaging its internal mechanism.

5 In accordance with the invention, the coupling consists of a threaded bolt that projects from the casing of the motorized punch through an orifice for the purpose, and a base of a needle that is fixed to said bolt such that it can be disassembled by unscrewing.

10 The bolt is coupled mechanically to a motor that generates shuttle movements therein in the axial direction, and protrudes from the casing through a hole that is placed in a protruding prolongation and/or sleeve, ideally cylindrical, thereof, passing centrally through its end.

15 On the other hand, the base of the needle consists of a body, ideally of plastic, with a disc-like form, the edges of which extend in the axial direction of the needle on both faces forming housing on one side and protruding from the same face, in a prolongation in a central position where the body of the needle is attached by a mount that cannot be disassembled, while on the opposite face of the prolonged edge forms a skirt that overlaps and covers the prolongation and/or sleeve of the casing of the mechanized punch. In the central part of this face, the disc-like body has a threaded hollow by which the threaded bolt of the mechanized punch is attached.

20 In this fashion, the threaded join avoids accidental uncoupling between the bolt and the base of the needle, while the housing, in cooperation with the overlap of the skirt of the base of the needle with the prolongation of the casing of the mechanized punch confines the fluids and/or prevents them from entering the area where the orifice of the prolongation of the casing is located, crossed by the bolt, preventing its interior from becoming contaminated.

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BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 shows a cross-sectional view through the coupling chamber of the invention.

30 Figure 2 shows a cross section through the base of the coupling needle of the invention.

Figure 3 shows in detail the threaded bolt of the coupling of the invention.

DESCRIPTION OF A PRACTICAL EMBODIMENT OF THE INVENTION

The coupling 1 of the invention consists of a threaded bolt 2 emerging from a protruding cylindrical sleeve 3 of the casing 4 of the mechanized punch that generates the movement of the needle by means of a centered orifice 5 at the end thereof, and a needle base 6.

The bolt 2 screws into the needle base 6, which consists of a plastic body 7 with general disc-like form that constitutes a shield that prevents direct projection of fluids towards the orifice 5 of the sleeve 3.

One of the faces of the body 7 has a centered threaded orifice 8 for coupling to the bolt 2, while its borders are extended to form a skirt 9 of complementary overlap over sleeve 3.

On the opposite face, the body 7 has a protuberance 9a in a centered position protruding from where the body of the needle that cannot be disassembled is mounted, extending the borders 10 to form a housing that prevents diffusion of the fluids towards the end zone of the coupling to the bolt in cooperation with the skirt 9.

The outer perimeter part of the base 6 of the needle incorporates a ridge 11 in an axial direction that favors adherence with the fingers to screw in and/or unscrew the base of the needle of the bolt.

With the nature of the invention sufficiently described, as well as a practical embodiment thereof, it should be stated that the details of the aforementioned dispositions and presented in the attached drawings can be changed without altering the fundamental principle.